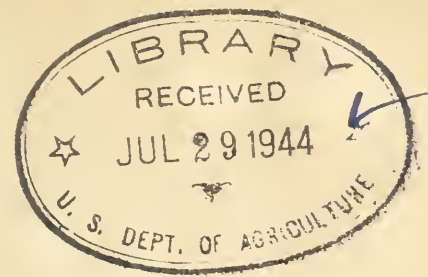


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THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States
issued on the first of each month from March to December, inclusive.

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR
JANUARY AND FEBRUARY, 1928.

This number of the Survey Bulletin is the first of our eighth volume. We wish to take occasion at this time to acknowledge the very hearty cooperation that we are receiving from our collaborators. The material has steadily increased and improved from year to year, in quantity and quality, and we wish to solicit your continued contributions to this work.

It is with considerable satisfaction that we note the organization of a Survey to cover the Pacific Islands, promoted by the Hawaiian Sugar Planters' Association and the Bishop Museum. Arrangements are being made by which the Insect Pest Survey will be kept in touch with such observations on economic insects as are made incident to this Survey. The project is financed to the amount of \$62,500 and is to function for the next four years. Dr. J. Philpott Mumford will have charge of the field work.

What is probably the most serious development in the pink bollworm situation that has occurred since the introduction of this insect into the United States in 1917 is a new and very extensive outbreak in mid-western Texas. As far as is known, a considerable portion of Ector, Midland, Martin, Andrews, Glasscock, Dawson, and Howard Counties are infested.

An unusually small number of sugarcane borers entered hibernation in 1927.

The abundance of bags of the bagworm on trees and plants readily observable during the winter months indicates that this insect was especially prevalent during 1927 in southwestern Ohio and southern and central Missouri.

The winter Hessian-fly survey in Kansas indicates that large numbers of this insect are still present in the fields. In the Middle Atlantic States more flies have been observed than during the last few years, while throughout the East-Central States moderate infestations are generally reported.

The chinch bug is not reported as present in unusual numbers in hibernation quarters from any part of the chinch-bug belt, and no early spring reports of the green bug have been received.

Throughout the Eastern States aphid eggs in general on deciduous fruit trees are comparatively scarce.

Reports of very high mortality of the San Jose scale have been received from the Eastern and Central States as far south as Georgia.

The Blastophaga that played so important a role in the establishment of the Smyrna fig industry of California is now playing a new role in that region as the vector of a disease known as fig endosepsis.

Many larvae of the pepper weevil were found in February, indicating a low winter mortality in southern California.

During the late fall and early winter the vegetable weevil very seriously damaged the turnip crop in parts of Mississippi and Alabama.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Oregon Don C. Mote (February 20): Assistant County Agent Lawrence of Klamath Falls reports about a thousand acres of grasshopper egg beds in that district and expects a huge grasshopper outbreak this season.

WHITE GRUBS (Phyllophaga sp.)

Missouri L. Haseman (February 24): Recent diggings in a blue grass sod orchard showed grub worms to be unusually abundant and most of them at a depth of less than 6 inches from the surface. To an area of approximately 4 square feet eight grubs were taken from the first 6 inches of soil, all living, and two within the second 6 inches of soil.

JAPANESE BEETLE (Popillia japonica Newm.)

GENERAL STATEMENT

Monthly Letter of the Bureau of Entomology, No. 165 (January, 1928): During the winter months three shipments of parasites were received at the Moorestown laboratory. All of these were Tiphia wasps in the cocoon stage, reared from ovipositions obtained on Popillia grubs at the different field laboratories. From Shillong, India, 9,000 cocoons of Tiphia No. 2036, a large percentage of which were affected by fungus, were received in November. From Miho, Japan, 5,000 cocoons of Tiphia No. 1851, in very good condition, and 700 cocoons of Tiphia No. 5, from Suigen, Korea, which were largely attacked by fungus, arrived in December. From Pennin, China, 9,000 cocoons of Tiphia No. 115 arrived in January in very good condition.

CEREAL AND FORAGE CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Pennsylvania C. C. Hill and H. D. Smith (January 26): Wheat fields sown in the fall of 1927 in the east-central part of the State are heavily infested with the Hessian fly and considerable damage can be looked for in this section. The southeastern and western counties are much more lightly infested.

Maryland C. C. Hill and H. D. Smith (January 26): The young wheat is heavily infested with the Hessian fly in many of the wheat-growing counties and there are prospects of damage from the fly in the coming year. Only light infestations were found on the eastern shore.

- West Virginia H. D. Smith (January 26): Wheat fields sown in the fall of 1927 in Berkeley and Jefferson Counties are heavily infested with the Hessian fly this year. Parasitism of the fall generation of the fly in these sections is very low, which makes the outlook probable for damaging infestations during the coming season.
- Virginia H. D. Smith (January 26): Many fields of young wheat were found badly damaged by the Hessian fly in the counties of Augusta, Clarke, Frederick, Pulaski, Rockbridge, Rockingham, and Shenandoah. Other counties were less heavily infested.
- North Carolina H. D. Smith (January 26): Recent surveys of the counties of Guilford, Mecklenburg, and Durham showed that fields sown in fall wheat were lightly infested with the Hessian fly with no prospects of serious damage from this source for the coming year.
- Illinois W. P. Flint (February 21): Severe winter killing of wheat has occurred in many of the late-sown fields in east-central and southern Illinois. Early sown fields in these sections appear to be in better condition at the present time, although there are moderate infestations by the Hessian fly in most of these fields.
- Missouri L. Haseman (February 24): No recent observations have been made on the wintering conditions of the Hessian fly but in seeding plats for Hessian fly studies at Columbia it was found from inspection of plants during December that a fair infestation of the fly seems to be again developing in this area.
- Kansas J. W. McCulloch (February 23): The Hessian fly promises to be a big problem again this year. Surveys made during the fall and early winter showed a rather heavy infestation throughout central Kansas, extending from Sumner County to Clark County on the south, and reaching northward almost to the Nebraska line. Material which has been collected in the field shows that the winter mortality has been light, and with favorable conditions this insect should cause considerable trouble in May and June.

CHINCH BUG (Blissus leucopterus Say)

- Kansas J. W. McCulloch (February 23): The chinch-bug outbreak which has been under way for several years appears to be about over. Excessive rainfall last summer was very detrimental to this insect, and as a result the number of bugs going into hibernation last fall was comparatively light. There has also been a rather heavy mortality of the bugs in hibernation, due to several abrupt drops in temperature following periods of warm weather.

GREEN BUG (Toxoptera graminum Rond.)

Kansas J. W. McColloch (February 23): We have had no reports of the green bug in the State this winter.

CORN

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Michigan C. B. Dibble (February 20): It may be of interest to note that another lot of Microbracon gelechiae Ashm., a native parasite, was bred from corn-borer material collected by myself at Monroe during the summer of 1927. The determination of this species was made by Mr. A. B. Gahan of the United States Bureau of Entomology.

It is also of interest to note that the fungus Sporotrichum globuliferum, as determined by Prof. Pettit, was likewise obtained from the experimental plots at the Michigan State Corn-Borer Station near Monroe.

CLOVER

CLOVER SEED MIDGE (Dasyneura leguminicola Lint.)

Illinois J. H. Bigger (February 18): Much damage probable in 1928. Fall conditions favored late brood in central part of State.

CLOVER SEED CHALCID (Bruchophagus funebris Howard)

Illinois J. H. Bigger (February 18): Fall conditions were favorable in central part of State for late-brood chalcids. It seems likely that there will be considerable damage in 1928.

F R U I T I N S E C T S

GENERAL FEEDERS

APHIDIIDAE

West Virginia W. E. Rumsey (February 20): Our field man reports aphids eggs generally distributed but not abundant.

Illinois W. P. Flint (February 21): Only moderate to very small numbers of aphid eggs have been found on apple twigs in the orchards in central Illinois. In many orchards it is practically impossible to find eggs even after several hours' search.

Missouri L. Haseman (February 24): The abundance of aphids eggs on the twigs of apple and haw seems to vary materially in the different orchards in central Missouri. Some trees are heavily infested, others show only small numbers of eggs.

O EUROPEAN RED MITE (Paratetranychus pilosus Can. & Fanz.)

Ohio E. W. Mendenhall (February 23): I find the eggs of the European red mite on apple trees in the southwestern part of the State quite bad, especially where trees are neglected and not sprayed.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Virginia W. S. Abbott (February 16): Appears to be increasing in this vicinity (Vienna).

Georgia E. Lee Worsham (February 10): It may be of interest to you to know that the cold weather we had in January was responsible for reducing the San Jose scale in the commercial orchards in middle and northern Georgia from 75 to 95 per cent. In the Cornelia district we were unable to find enough scale in any of the orchards for our experimental work.

Ohio E. W. Mendenhall (February 23): I find the farm orchards where there is not much care given badly infested with the San Jose scale. Where periodical sprayings are carried on the scale is held pretty well in check.

Illinois S. C. Chandler (February 21): Examination of unsprayed scale on January 20 showed about 60 per cent of the scale in the overwintering stage to be dead. Some injury to peach trees has resulted from fall applications of dormant spray from both lime sulphur and oil, the injury by the oil being slightly more severe than that caused by lime sulphur.

Missouri L. Haseman (February 24): From recent counts made in connection with some oil-spray tests at Columbia, Mo., it has been found that practically 99 per cent of the scales have been killed by winter conditions combined with parasitism. The records from untreated trees show a little better than 1 per cent living scale.

APPLE

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Missouri L. Haseman (February 24): In southern Missouri during the past season the woolly aphid was unusually abundant and from recent inspection surveys in the Marionville district it is found that overwintering signs of the aphid show promise of a heavy infestation this coming year.

CODLING MOTH (Carpocapsa pomonella L.)

Illinois W. P. Flint (February 12): Examinations of overwintering larvae made by members of the Survey staff in southern, eastern, and westcentral Illinois show that in southern Illinois approximately 20 per cent of the larvae have died during hibernation, while in

central Illinois approximately 50 per cent of the overwintering larvae are dead, the cause of the death being apparently fungus infection.

Missouri

L. Haseman (February 24): Recent collections of apple worms for breeding-cage investigations show that they have been wintering well at Columbia. Comparatively few dead worms appear in the cocoons and up to February 15 small percentages of the worms have been removed by woodpeckers or other birds.

LEAF CRUMPLER (Mineola indigenella Zell.)

Missouri

L. Haseman (February 24): The apple leaf crumpler is more abundant this winter on young fruit trees and wild haws than usual and the pest seems to be wintering safely up to the present time.

PEACH

TILE HORNED PRIONUS (Prionus imbricornis L.)

Mississippi

R. W. Harned (February 15): On January 14, Inspector R. B. Deen sent in two large larvae that were taken from peach trees on the property of James A. Coleman, Tupelo. One of these larvae is still alive in the insectary. The other specimen was sent to Washington and identified by Dr. A. G. Boving as Prionus imbricornis L. The owner of this orchard wrote on January 24, as follows:

"These borers were gotten out of adjoining trees that were 25 feet apart. Both of these trees were in a very rich sandy loam at the foot of the hill in my orchard. I find most of my borers in this part of the orchard and very few in the heavy clay near the top of the hill. These worms came out of especially fine trees which bore fine crops in 1926, but showed signs then of dying. I pruned them very close, but they showed further signs of decay last season. About half of the trees were still alive when I had them dug up, and I feel sure that the worms killed the trees. My attention was attracted to them because of their large size, but more especially instead of boring between the bark and the wood, you will notice from the specimen of the root sent you they bored directly into the wood. These trees were gassed with paradichlorobenzene in October, 1926, and October, 1927, but evidently this had no effect on these borers."

FIGS

BLASTOPHAGA (Blastophaga psenes L.)

California

Monthly News Letter Los Angeles County Horticultural Commission Volume 10, No.1, (January 15): A survey of known plantings of caprifigs in Los Angeles County has recently been completed, according to K. L. Wolff, Deputy Horticultural Commissioner in

Charge of the Survey in that area. The work was carried out as part of a State-wide program of the State Department of Agriculture to wipe out the disease known as fig endosepsis. According to University of California authorities, this disease is transmitted to the Smyrna type figs by the Blastophaga wasp, necessary to the proper pollinization of this species of fig. Under the plan of operation all of the overwintering or mamme crop figs are to be picked and forwarded by the growers to a central point of sterilization before February 15, 1928. The emerged wasps will be returned to the owners in vials to be released to the profichi crop. This latter crop can then be distributed in the commercial orchards in the usual manner.

While the survey showed a very limited number of caprifu trees in the county, their listing and subsequent proper handling is of the utmost importance to the success of the disease-control campaign.

WALNUT

CODLING MOTH (Carpocapsa pomonella L.)

California

Monthly News Letter Los Angeles County Horticultural Commission Volume 10, No. 2 (February 15): In several new areas of Los Angeles County walnut growers found it necessary to treat for the codling moth for the first time last season. According to figures compiled by K. L. Wolff, Deputy Horticultural Commissioner of Los Angeles County, growers in these new areas sprayed 724 acres and dusted 89 acres for this pest during 1927. Mr. Wolff further states that control results were comparable to the degree of control obtained in the older infested areas of the county during previous years. Tray counts on index orchards showed the average treated property to have an infestation of 2.8 per cent, while untreated orchards in the same area averaged 7.5 per cent.

CITRUS

APHIDIDAE

California

Monthly News Letter Los Angeles County Horticultural Commission Volume 10, No. 2 (February 15): Citrus aphids are getting an early start in many parts of the county according to reports of Los Angeles County district horticultural inspectors, and will bear careful watching. They are damaging new growth by their attack almost as soon as the buds break. The attack at present seems to be confined to the south and east or warmer sides of the trees. New fruit wood in many cases is either killed in the initial stage or so weakened that it can not support the normal bloom. Failure to set a crop may often be directly traced to neglect in instituting timely control measures against this pest.

SPIRAEA APHID (Aphis spiraeicola Patch)

Florida

J. R. Watson (February 23): Among the outstanding entomological conditions in Florida this year is the scarcity of the citrus aphid. It does not appear now that they can possibly get abundant enough to do much harm to the first flush of growth and to the bloom. This happy condition of affairs is due entirely to the drought and freezes of the past winter which either inhibited all new growth on citrus or froze it so that the aphids starved to death. This, of course, refers to Aphis spiraeicola.

WHITE FLIES (Aleurodidae)

Florida

J. R. Watson (February 23): Dialeurodes citri and D. citrifolii have been somewhat more abundant than usual because of the drought which prevented the proper development of the entomogenous fungi. The rainfall for Florida during 1927 averaged about one-third less than normal and the result was a heavy increase of these insects which are usually controlled by the entomogenous fungi.

CITRUS WHITE FLY (Dialeurodes citri Ashm.)

Virginia

Monthly News Letter Los Angeles County Horticultural Commission, Volume 10, No. 1 (January 15): The citrus white fly is one of the insect pests against which California is zealously guarding her citrus orchard. It is for that reason that a local well known nurseryman should be commended for his cooperation in taking up with the County Horticultural Commissioner the importation of 10,000 gardenias from the State of Virginia, adjacent to, but not included in the known infested and quarantined against white fly area. A specimen shipment, ordered, subject to inspection from this supposedly clean area, was found by the quarantine inspectors of the county to be infested with the dreaded white fly, and as a consequence the nurseryman immediately cancelled all negotiations for the plants.

Louisiana

W. E. Hinds (February 25): The citrus whitefly is hibernating on its usual host plants but the cold of early January resulted in rather complete defoliation of citrus and reduction of foliage on privets also which will result in reducing the initial infestation by this pest.

CITROPHILUS MEALYBUG (Pseudococcus kahani Green)

California

Monthly News Letter Los Angeles County Horticultural Commission Volume 10, No. 2 (February 15): Navel oranges in the southern California section are reported as materially cleaner than last year. This is believed to be due to the liberation of Cryptolaemus for the control of the citrophilus mealybug.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida

J. R. Watson (February 23): Counts on the scale insects indicate that in the north-central and western parts of Florida about 85 per cent of the purple scale was killed by the freeze of January 3, at temperatures around 15°F. Those that escaped were almost entirely eggs.

CITRUS RUST MITE (Eriophyes oleivorus Ashm.)

Florida

J. R. Watson (February 23): Rust mites were more abundant than is usual during the winter. This is correlated with the unusual drought. Most of them seemed to have escaped temperatures 26°F and above in the citrus belt.

CITRUS RED SPIDER (Paratetranychus citri McGregor)

California

Monthly News Letter Los Angeles County Horticultural Commission (January 15): Recent heavy rains and cold weather have not yet checked the citrus red spider which, according to H.H. Wilcomb, Acting Deputy Horticultural Commissioner in Charge of Citrus Pest Control in Los Angeles County, has been particularly active in all citrus districts of the county following the unusually warm days of late December and early January.

TRUCK - CROP INSECTS

MISCELLANEOUS FEEDERS

WIREWORMS (Elateridae)

Missouri L. Haseman (February 24): In recent diggings in a blue grass sod orchard no wireworms were found even when the digging extended down to approximately 18 inches. In other diggings on a sunny slope in a grape vineyard wireworms in small numbers were found within the first 6 inches of soil.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon Don C. Mote (February 13): We took a hike out of town, climbing one of the hills commonly known as Baldy in this region, about 800 feet in elevation. On top of this hill we observed a few adults of Diabrotica soror climbing on the blades of grass and some flying through the air. Mr. Hill, under date of February 20, reports seeing one on grass in the Williamette Valley.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Alabama J. M. Robinson (February 15): It might interest you to know that Diabrotica duodecimpunctata has been active along in January and has been laying eggs for over a week. Some of the adults have been parasitised by an undetermined fly.

CONVERGENT LADYBEETLE (Hippodamia convergens Guer.)

Oregon Don C. Mote (February 13): We noticed while hiking on Baldy hills quite a number of ladybird beetles, Hippodamia convergens, active and on the wing.

TARNISHED PLANT BUG (Lygus pratensis L.)

Illinois S. C. Chandler (February 21): Tarnished plant bugs are not so abundant in hibernation as in the winter of 1926-27.

ARTICHOKE PLUME MOTH (Platyptilia carduidactyla Riley)

California Monthly News Letter Los Angeles County, Hort. Comm., Vol. 10, No. 2, (February 15): The artichoke plume moth (Platyptilia carduidactyla) has become so destructive to artichoke in southern California that careful inspection is being inaugurated in the Los Angeles market. The larvae of this moth bore into the edible portions of the artichoke.

STRAWBERRY

STRAWBERRY CROWN BORER (Tyloderma fragariae Riley)

Missouri L. Haseman (February 24): Samples of soil and debris collected from

infested strawberry fields and stored in the laboratory for ascertaining overwintering adult crown borer conditions, have shown that between 12 and 20 adult crown borers pass the winter in the soil and plant debris in an area of approximately 20 square feet.

BEANS

GREEN PEACH APHID (Myzus persicae Sulz.)

Florida

J. R. Watson (February 23): In late December and early January beans were generally heavily infested with Myzus persicae. The freeze of January 3 destroyed the hosts and of course the infestation of aphids as well.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California

J. C. Elmore (February 21): At present the pepper weevil is known to occur in Ventura (first found here in January, 1928), Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. As indicated, Ventura County is a new locality and a very important one because pepper growing has become a very important crop there. The pepper crop in Orange and Los Angeles Counties was damaged about 25 per cent on the average with the losses running as high as 50 per cent in some places. The lesser damage compared to the previous season was due to the late spring and control operations. During the present winter immature states of the weevil have been found in abandoned fields to date (February 20). This condition is unusual as it is not common to find larvae and pupae so late in the season. Basing our estimate on previous knowledge, the pepper weevil will probably be among the front ranks as an outstanding insect pest this coming season. Many abandoned pepper fields have remained standing where until recently, it has been possible to collect hundreds of adult weevils for hibernation studies. There appears to be no hibernation so far this winter. This point is very interesting in view of the very definite hibernation period with the cotton boll weevil.

TURNIP

VEGETABLE WEEVIL (Listronotus obliquus Gyll.)

Mississippi

R. W. Harned (January 17): On January 7, J. E. McEvelly, Inspector of the State Plant Board at Laurel, wrote as follows: "I recently called on Mr. George Leatherberry of the Bucatunna Canning Company, and investigated the insect that caused great loss to turnips during the months of November and December. I made an inspection of an old turnip field and found the damage to be caused by the Australian tomato weevil or turnip weevil. I found larvae of this insect just below the surface of the ground. They were dead owing to the recent freeze. Mr. Leatherberry stated that about 90 per cent of the turnip crop in that section was killed or damaged by this insect. They had planned on packing 25,000 crates of greens but actually packed 7,000. They

had contracts for 60 acres in Green County and 110 acres in Wayne County, Mississippi, and 40 acres in Washington County, Alabama. The weevil caused serious damage to this entire acreage.

TURNIP APHID (Rhopalosiphum pseudobrassicæ Davis)

Florida J. R. Watson (February 23): In late December and early January turnips were generally heavily infested with Aphis pseudobrassicæ Davis. The freeze of January 3 destroyed the hosts and of course the infestation of aphids as well.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

PINK BOLL WORM (Pectinophora gossypiella Saund.)

Texas Official Record, Vol. 7, No. 6, (February 8): A new and very extensive outbreak of the pink boll worm has developed in western Texas. This new invasion has been found to cover a considerable portion of Ector, Midland, and Marten Counties in the western part of the Texas cotton belt. This is probably the most serious situation in pink boll worm work that has developed since 1917.

BOLL WEEVIL (Anthonomus grandis Boh.)

Louisiana W. E. Hinds (February 25): Winter minimum temperatures in Louisiana have not been low enough to accomplish any unusual destruction of boll weevils in hibernation. At the time of minimum cold it was also dry, and this combination is less effective than the same cold if immediately following heavy rains. Boll weevils have not yet begun to emerge from our hibernation cages, but we anticipate at least an average abundance of weevils to start the initial attack on cotton in Louisiana this spring. The defoliation of cotton by the leaf worm was much less general in the fall of 1927 than in 1926 and many more weevils, therefore, entered hibernation last fall.

Texas F. L. Thomas (February 23): Fifty-three lbs. of moss examined at Sugarland showed that $28\frac{1}{2}$ per cent of the weevils present were alive. In this case the survival would amount to 225 weevils per ton. In 122 lbs. of moss examined at College Station 2.7 per cent, or 15.9 weevils, were alive per ton.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W. E. Hinds (February 25): The sugarcane borer population entering hibernation was decidedly less in the fall of 1927 than in the fall of 1926. Climatic conditions during the winter have been fairly favorable for borer survival but the infestation will undoubtedly

be much lighter this spring than a year ago. During February an excess of rainfall and frequent cold spells have held back the early growth of cane, but sprouting of cane in the fields has been unusually abundant for this time of year because of the greater vigor of the new varieties which are now being planted generally.

FOREST AND SHADE - TREE INSECTS

MISCELLANEOUS FEEDERS

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Ohio E. W. Mendenhall (February 16): The egg masses are very plentiful on many of the shade trees and in crevices of buildings and fences. At Columbus and throughout southwestern Ohio the egg masses of the tussock moth are very numerous.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Ohio E. W. Mendenhall (February 16): The winter cases of the bagworm are very numerous on shade trees and shrubs in and about Columbus and southwestern Ohio. Some of the public schools have a campaign to collect the bags. (February 23): The bagworm cocoons are very abundant on nearly all shade trees and many kinds of shrubbery in and about Dayton. This is a real pest in Dayton and Cincinnati. They are very destructive to many kinds of trees and especially to the conifers.

Missouri L. Haseman (February 24): Through southern Missouri and through central Missouri a real infestation of this pest developed last year but recent inspections of the overwintering bags show that a heavy infestation of parasites is present and breeding experiments are under way to determine what species of parasites are present.

SPRING CANKER WORM (Paleacrita vernata Peck)

Kansas H. B. Hungerford (February 13): Considerable emergence of both sexes was in progress on February 6. Males have been appearing on the tree bands since about the middle of January.

J. W. McColloch (February 23): Cankerworms are on the increase, and the possibilities are that there will be some damage to shade trees and fruit trees this year. Moths have been out at various times from early in January.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Ohio E. W. Mendenhall (February 23): The oyster-shell scale is quite bad in Dayton and vicinity on soft maple, Carolina poplar trees, and lilac bushes and, as far as I have discovered, it is bad on poplar, ash, soft maple, lilac bushes, and some others, all through the southwestern part of the State.

BOXELDER

BOXELDER BUG (Leptocoris trivittatus Say)

Oregon Don C. Mote (February 20): Scullen reports the boxelder bug common and active, crawling on summer days. One day last week a half cup of these bugs ~~was~~ collected in fifteen minutes.

CEDAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi R. W. Harned (January 17): Insects belonging to the genus Pissodes, and probably to the species deodarae, were found causing serious injury to Cedrus deodara plants at Brookhaven during the latter part of December.

MAPLE

CECROPIA MOTH (Samia cecropia L.)

Ohio E. W. Mendenhall (March 1): I find cecropia-moth cocoons quite plentiful on the maple trees in parks and along the streets in Columbus and other towns and cities in southwestern Ohio.

WALNUT SCALE (Aspidiotus juglans-regiae Comst.)

Ohio E. W. Mendenhall (January 11): I found the soft maple trees in Celina, Mercer County, badly infested with the walnut scale.

OAK

GOLDEN OAK SCALE (Asterolecanium variolosum Ratz.)

New Zealand Monthly Letter, Bur. Ent., No. 165, (January, 1928): Two shipments of the golden oak scale, parasitised by what appears to be Habrolepis dalmanni Westw., have recently been sent from Melrose to Dr. R. J. Tillyard, of New Zealand, where this scale is causing great damage to the trees.

PINE

MOUNTAIN PINE BEETLE (Dendroctonus monticolae Hopk.)

Montana Official Record, Vol. 7, No. 7, (February 15): The attention of the Bureau of Entomology was called to an epidemic in 1909, when the mountain pine beetle was killing lodgepole pine in the Flathead National Forests in Montana near the Canadian border. This infestation has spread southward through the Missoula and Bitterroot National Forest, for the most part on the west side of the Continental Divide. In reaching a low point on the Continental Divide between the Bitterroot and the Beaverhead Forests, the beetles started to

swarm across the Divide into the more accessible and merchantable timber surrounding the Bighole Basin. The present efforts of entomologists are to hold the beetle to the west side of the Divide.

SOUTHERN PINE BEETLE (Dendroctonus frontalis Zimm.)

Southeastern States Monthly Letter, Bur. Ent., No. 165 (January, 1928): J. A. Beal reports that he has been in the field a considerable part of January making studies of the effect of a sudden ^{drop} in temperature in the latter part of December on broods of the southern pine beetle. He states that everywhere there seems to be very high mortality of all stages except the egg.

INSECTS ATTACKING GREENHOUSE AND
ORNAMENTAL PLANTS

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Maryland E. N. Cory (January 16): The euonymus scale was reported by G. L. Sauter as heavily infesting euonymus at Woodlawn.

ROSE

ROSE SCALE (Aulacaspis rosae Bouche)

Missouri L. Haseman (February 24): In recent inspection surveys in the Marionville district, roses, raspberries, and blackberries were found to show an unusual infestation of the rose scale. An examination of these shows them to be wintering in both the egg and the larval stages.

STRAWBERRY ROOT WORM (Paria canella Fab.)

Mississippi R. W. Harned (January 17): On December 13, Inspector R. B. Deen found beetles injuring roses at Tupelo. These beetles were sent to Washington for definite determination, and were determined by Mr. Fisher of the Bureau of Entomology as Paria canella var. (vaguely different from var. Silvipes Horn).

INSECTS ATTACKING DOMESTIC

ANIMALS

POULTRY

TROPICAL FOWL MITE (Liponyssus bursa Berlese)

Missouri

L. Haseman (February 24): Last spring this mite was reported on local poultry farms near Columbia and in the last few days a second report has come from Howell County with a record to the effect that the pest has been multiplying rapidly through the winter months causing injury to poultry in that county.

INSECTS INFESTING HOUSES AND

PREMISES

TERMITES

Kansas

J. W. McColloch (February 23): Termites continue to be a problem, and we have received more reports of injury this winter than usual. In the past, most of our inquiries relative to termite damage came during the summer months.

STORED - PRODUCTS INSECTS

COCOA

RICE MOTH (Corcyra cephalonica Staint.)

Connecticut

R. B. Friend (December 20): This insect was found infesting cocoa powder in a chocolate factory.

